

Remarks

Reconsideration and allowance of this application, as amended, is respectfully requested.

This amendment is in response to the Office Action dated June 15, 2004. By the present amendment, claim 5 has been amended for clarification.

Reconsideration and removal of the 35 USC §112, first paragraph, rejection set forth in the Office Action is respectfully requested. With regard to this, it is noted that this rejection set forth in paragraph 6 of the Office Action specifically refers to claim 1. However, it is noted that claim 1 has been canceled by the Supplemental Preliminary Amendment filed on March 15, 2004. Accordingly, the following remarks are based on the presumption that the rejection actually pertains to independent claim 5, which replaced claim 1. If this is not the case, clarification of this in the next Office Action is respectfully requested.

Referring to claim 5, this claim has been amended to clarify the last paragraph by specifying that the second type command indicates a command termination of the second type format command. In conjunction with this, the following explanation is provided regarding the support for the claim terminology questioned in the 35 USC §112, first paragraph, rejection.

To begin with, the invention defined by claim 5 and its dependent claims pertains to the command format of a non-volatile memory device, an example of which command format is shown in Fig. 3. In particular, the claimed "first type command" corresponds to the "first command" shown in Fig. 3 while the claimed "second type command" corresponds to the "second command" shown in Fig. 3.

Fig. 55 shows the claimed "first type format command" sequence in terms of the step S30 for fetching the first type command. It is to be noted that this particular

command sequence (that is, the first type format command sequence) does not include a step for fetching a second type command. Fig. 56, on the other hand, discloses a second type format command sequence.

Fig. 16 also provides an illustration of the "second type format command" sequence. For example, the first step S1 is for fetching a first type command. Step S4 shows the fetching of a second type command. Reference is also made to Figs. 61 - 63 which disclose the command sequence including fetching the first type command (e.g., steps S70 and S80) and fetching the second type command (e.g., steps S76 and S87).

As can be seen from the above noted figures and their corresponding description in the Specification, when a non-volatile memory receives the first type format command, the memory will perform an operation in accordance with a first type command without fetching the second type command. When the non-volatile memory receives the second type format command, on the other hand, the memory will perform the operation in accordance with the first type command after it has fetched the second type command. Regarding this, the first type command pertains to an arbitrary one of a plurality of operations. The second type command, on the other hand, indicates a command termination for the first type format command. As such, the non-volatile memory will recognize that the command input is completed and, accordingly, operation in accordance with the first type command can be started.

Based on the above explanation, it is respectfully submitted that the terminology referred to in paragraph 6 of the Office Action is, in fact, supported by the Drawings and Specification of the present application. Accordingly, reconsideration and removal of the 35 USC §112, first paragraph, rejection is respectfully requested.

Reconsideration and removal of the 35 USC §112, second paragraph rejection regarding claim 7 is also respectfully requested. This claim defines that the second type format command (which includes the first and second type commands) includes a second write command. As such, there is no contradiction between this claim language and the statement in parent claim 5 that the second type command indicates a command termination of the second type format command since the second type format command includes both the first type command and the second type command. Accordingly, reconsideration and removal of the 35 USC §112, second paragraph, rejection is also respectfully requested.

Reconsideration and removal of the rejection of claims 5-12 as being anticipated by Hamakawa (USP 5,881,002) is also respectfully requested. Regarding this, it is respectfully submitted that the Hamakawa reference fails to teach or suggest the claimed "second type command" which "indicates a command termination of said second type format command" or the "second type format command" which includes the first type command and the second type command, as will be discussed below.

More specifically, Fig. 5 of Hamakawa shows a timing chart for inhibiting an erase operation. When a command enable signal (/CE) is at a logical low level, the non-volatile memory will recognize a value (20H) on the data bus as being the erase command. Accordingly, as shown in the timing chart of Fig. 5, this erase operation will be inhibited. Thus, the non-volatile memory will receive the value (20H) again when the enable state for the command enable signal is applied.

Fig. 6 of Hamakawa shows a timing chart for the data write operation. This timing chart shows that the non-volatile memory can receive a first value (40H) and a second value (00H) when the command enable state indicates an enable state.

However, as noted in column 8, line 8 through column 9, line 2, the non-volatile memory will receive the first value (40H) as a write command (e.g., see column 8, line 14), and will receive the second value (00H) as a write command (column 8, line 15 to column 9, line 2) to write an address 4000H. As such, although it might appear upon first impression that Hamakawa teaches first and second type commands, in fact, there is no corollary for this claimed second type command which "indicates a command termination of said second type format command."

In further regard to this, Fig. 7 of Hamakawa shows a timing chart for a data read operation. The timing chart shows that the non-volatile memory receives a value (10H) upon the enable state of a command enable signal as a read command. Based upon this, the non-volatile memory outputs data (DOUT) stored into an address 4000H. However, again, there is no corollary for the claimed second type command that "indicates a command termination of said second type format command."

Accordingly, although Hamakawa teaches a variety of command signals operated based upon the enable state of a command enable signal, there is no corollary for either the second type command that indicates a command termination of the second type format command or the second type format command itself, which includes both a first type command and the second type command. Therefore, reconsideration and removal of the rejection of claims 5-12 over Hamakawa is also respectfully requested.

Reconsideration and removal of the obviousness type double patenting rejection set forth in paragraph 4 of the Office Action is also respectfully requested. This obviousness type double patenting rejection refers to claims 1-3 of U.S. Patent

No. 6,507,502. It is assumed for purposes of the following discussion that there has been a transposition of the numbers since USP 6,507,502 was issued to Tsubota, directed to a snubber circuit and power transformer, assigned to Omron Corporation. As such, since the inventorship and the assignees are different, USP 6,507,502 could not properly serve as a basis for an obviousness type double patenting rejection. Accordingly, for purposes of the following discussion, it is assumed this rejection pertained to the parent USP 6,507,520, which has the same inventorship and same assignee as the present application.

Regarding USP 6,507,520, although claims 1-3 define first and second commands, it is to be noted that the above-discussed feature of the "second type command indicates a command termination of said second type format command" is not set forth in these claims. As such, it is respectfully submitted that the present claims define a separate patentable invention from the patentable invention defined by the claims of the parent USP 6,507,520. Accordingly, reconsideration and removal of the obviousness type double patenting rejection is respectfully requested.


Although the applicants traverse the obviousness type double patenting rejection for the grounds noted above, if it is determined by the Examiner that all other grounds of objection are overcome by this response, it is requested that the Examiner contact applicants undersigned attorney at the number indicated below to discuss the possibility of overcoming the obviousness type double patenting rejection without the need for issuance of a further Office Action.

To the extent necessary, applicants petition for an extension of time under 37

S.N. 10/776,190

CFR §1.136. Please charge any shortage in the fees due in connection with the filing of this paper, to the Deposit Account of Antonelli, Terry, Stout & Kraus, LLP, Dep. Acct. No. 01-2135 (501.36887CC8), and please credit any excess fees to such deposit account.

Respectfully submitted,
ANTONELLI, TERRY, STOUT & KRAUS, LLP

A handwritten signature in black ink, appearing to read "Gregory E. Montone", written over a horizontal line.

Gregory E. Montone
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